



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,572	02/08/2006	Ashleigh Glen Quick	P29196	9287
7055	7590	07/02/2009	EXAMINER	
GREENBLUM & BERNSTEIN, P.L.C. 1950 ROLAND CLARKE PLACE RESTON, VA 20191			NG, FAN	
ART UNIT	PAPER NUMBER			
		2416		
NOTIFICATION DATE	DELIVERY MODE			
07/02/2009	ELECTRONIC			

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

[gpatent@gpatent.com](mailto:gpatent@gpatent.com)  
[pto@gpatent.com](mailto:pto@gpatent.com)

<b>Office Action Summary</b>	<b>Application No.</b> 10/567,572	<b>Applicant(s)</b> QUICK ET AL.
	<b>Examiner</b> Fan Ng	<b>Art Unit</b> 2416

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 03/11/2009.
- 2a) This action is FINAL.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 3-5,7-9,11-13,21-33,42 and 45-60 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) 21-33,42 and 45-60 is/are allowed.
- 6) Claim(s) 3-5,7-9,11 and 12 is/are rejected.
- 7) Claim(s) 13 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 08 February 2006 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review ("PTO-548")
- 3) Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No./Mail Date 05/17/2006
- 4) Interview Summary (PTO-413)  
 Paper No./Mail Date. \_\_\_\_\_
- 5) Notice of Informal Patent Application
- 6) Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed on 03/11/2009, with respect to claims 3, 8, 12, 21, 26, 31, 42, 46, 47, 51 have been fully considered, but claims 3-5, 7-9, 11-12 are rejected and claim 13 is objected by in view of the new grounds of rejection.

Claims 21-33, 42, 45-60 are allowed and see below for the reason of allowance.

This office action is made final since applicant has changed the scope of claims 3-5, 7-9, 11-13, where rejection is made on these claims only.

### ***Response to amendment***

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-5, 8-9, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burns et. al (5657326) in view of Nakano et al. (2003/0021228).

Regarding to claim 3, Burns teaches transmitting from a first device (**Fig. 1 #1**), a first data frame (**data frame send by the first device can be consider as first data frame**) including data that is coded (**col. 10, line 35-40: each frame include an UBS coded**

**sequence, also see col. 3, line 5-10**) so as to be perceived by a device (Fig. 1, #13) receiving the first data frame as a collision when the device is already receiving data from another source (Fig. 1, #2, and col. 5, line 5-15: if two transmitter transmit at the same time will result collision, thus when #13 receives data frames from #1, at the same time it already receiving from #2, will result collision);

Transmitting from a second device (Fig. 1, #2), a second data frame (**data send by the second device can be consider as second data frame**) including data that is coded (col. 10, line 35-40: each frame include an UBS coded sequence, also see col. 3, line 5-10) so as to be perceived by a device (Fig. 1, #13) receiving the second data frame as a collision when the device is already receiving data from another source (Fig. 1, #2, and col. 5, line 5-15: if two transmitter transmit at the same time will result collision, thus when #13 receives data frames from #2, at the same time it already receiving from #1, will result collision);

Detecting a coded data sequence from the second data frame while receiving the first data frame, recognizing a resulting data sequence as indicating a collision (col. 10, line 35-45: **collision is detected by decode the UBS data sequence, also in order to detect the collision, the system must be recognize the sequence, note, the first and second device are inter-changeable**);

Burns does not teach a collision signal is transmitted, but Nakano teaches that transmitting a collision signal that is itself perceived by one or more other devices a collision (**[0015]: after detects of collision, a collision signal is transmitted to all the nodes, thus collision signal itself is perceived by all the nodes**). Thus, it would have been obvious for one of ordinary skill in the art to implement Nakano into Burns, since both arts are devoted to collision resolving method, so they are in the same field of endeavor and Burns teaches a collision detection scheme, and Nakano suggest to send a collision signal after detection, so it would have been reasonable to combine, because telling peer an collision has occurred and let them stop transmission will reduce further collision (**[0015]**).

Regarding to claim 4, Burns and Nakano teaches a method according to claim 3, Burns teaches upon detecting the resulting data sequence (**col. 10, line 35-45: use coded sequence to detect the collision**), and Burns does not teach to transmit a collision signal, but Nakano teaches, transmitting a collision acknowledge signal to inform the first device that its transmission was interrupted (**[0015]: after detects of collision, a collision signal is transmitted to all the nodes**). Thus, it would have been obvious for one of ordinary skill in the art to implement Nakano into Burns, since both arts are devoted to collision resolving method, so they are in the same field of endeavor and Burns teaches a collision detection scheme, and Nakano suggest to send a collision signal after detection, so it would have been reasonable to combine, because telling

peer a collision has occurred and let them stop transmission will reduce further collision ([0015]).

Regarding to claim 5, 9, Burns and Nakano teaches a method according to claim 4, 8 wherein the collision acknowledge signal is transmitted after all the data frames are received (**it is obvious that transmitting an collision signal after all the data frames are received, because one antenna can not do transmitting and receiving at the same time**).

Regarding to claim 8, please refer to claim 3, where most of the limitations are taught. The limitation "a third device that receives the ...." in claim 8 is taught by Burns **Fig. 1, #13.**

Regarding to claim 12, please refer to claim 3, where most of the limitations are taught. Note, the transceiver in claim 12 is taught by Burns Fig. 1, #1, 2, 13, since these devices in Fig. 1, are transceiver.

Claims 7, 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burns et. al (5657326) in view of Nakano et al. (2003/0021228), and further in view of Chen et al. (6920520 B2).

Regarding to claim 7, 11 Burns and Nakano teaches a method according to claim 3, 8 but they do not teach one or more device relay the collision signal that they are received, but Chen teaches at **col. 3, line 21**, a repeater relay the collision signal to another repeater. Thus, it would have been obvious for one of ordinary skill in the art to implement Chen into Burns, since both arts are in the same field of endeavor and Burns teaches a packet collision detection scheme and Chen suggest relay the collision signal to multiple device, so it would have been reasonable to combine, because relay the signal to multiple device will allow more device notice the collision, and stop transmission and reduce further collision.

***Allowable Subject Matter***

3. Claims 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
  
4. Claims 21-25, 26-30, 31-33, 42, 45-60 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

For independent claim 21, 26, the examiner think the novelty is that "... to return the second acknowledgement state in a third time slot" ... "to return a collision acknowledgement in a fourth time slot"

For independent claim 31, the examiner think the novelty is that "... to receive a second acknowledgement state in a third time slot" ... "to collision acknowledgement state in a fourth time slot"

For independent claims 42, 46 the examiner think the novelty is that "... transmits positive acknowledge in the first of three sub-time slot of fourth time slot" ... "transmits negative acknowledge in a second of three sub-time slot of the fourth time slot"

For independent claims 47, 51 the novelty is set forth on P. 24 2<sup>nd</sup> and P25 4<sup>th</sup> of the amendment, respectively.

Claims 22-25, 27-30, 32-33, 45, 48-50, 52-60 are allowed, because they are depended on independent claims 21, 26, 31, 42, 47, 51.

### ***Conclusion***

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fan Ng whose telephone number is (571) 270-3690. The examiner can normally be reached on Monday-Friday; 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi H. Pham can be reached on (571) 272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2416

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/F. N./  
Examiner, Art Unit 2416

/Chi H Pham/  
Supervisory Patent Examiner, Art  
Unit 2416  
6/29/09